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(21) International Application Number: PCT/US97/22429 (22) International Filing Date: 3 December 1997 (03.12.97) (30) Priority Data: 60/032,181 3 December 1996 (03.12.96) US (71) Applicant: STRATEGIC ANALYSIS, INC. [US/US]: Quincy Street Station, Suite 175, 4001 North Fairfax Drive, Arlington, VA 22203 (US). (72) Inventors: FISHER, David, L.; 1140 Molokai Drive, Tega Cay, SC 29715 (US). RADCLIFFE, Matthew, H.; 2 Travilah Terrace, Potomac, MD 20854 (US). GARCIA, Cristina-Casimiro; 4833 W. Braddock Road #102, Alexandria, VA 22311 (US). RIVERA, Jorge, Arturo; 4740 Kenmore Avenue #204, Alexandria, VA 22304 (US). (74) Agents: BIRCH, Terrell, C., et al.; Birch, Stewart, Kolasch & Birch, LLP, P.O. Box 747, Falls Church, VA 22040-0747 (US).	(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
(54) Title: METHOD AND APPARATUS FOR FORMATTING SMART CARDS AND CARD READERS		
(57) Abstract <p>This software tool accessing methodology defines a powerful approach to interacting with smart card readers and smart cards. This software tool embodies the central software engine (Interface component), a series of configuration files, and modular plug-ins that provide methods for formatting cards and compatibility with evolving standards. This software tool enables effective building of smart card solutions without concern for the tedious detail of smart card vendor specifications and the unique interface challenges that exist with smart card readers. Instead of having to hardcode instructions within a smart card application, card and reader information is accessed by the interface component using the data stored in configuration files to therefore create flexibility and growth potential. The configuration files include information that tells how a software engine can communicate with an information system, a reader, and a card. This software tool is a turn-key solution when compared to existing very rudimentary smart card application development tools that require considerable smart card expertise and are limited to a single card or reader type.</p>		<pre>graph TD SCA[Smart card applications] --- ST[Software Tool 300] subgraph API [API] IC[Interface Component] FM[Formatting and writing methods] PCM[PC/SC methods] PKM[PKCS11 methods] JM[Java methods] NM[new methods] end ST --- API API --- S16[Support for 16-bits and 32-bits applications] S16 --- RC[Reader and card configurations] API --- S32[Support for 32-bits] S32 --- MSW[MS Windows] MSW --- PCRD[PC/SC reader and card drivers]</pre>